



Office of the President

MEMORANDUM

Date: June 5, 2019

To: Lina M. Rojas, Analyst – State University System & Fixed Capital Outlay
Education Unit – Office of Policy and Budget
Executive Office of the Governor Ron DeSantis
Lina.Rojas@LASPBS.STATE.FL.US

From: Donal O'Shea

Subject: Return on Investment: Master in Data Science & Analytics and Career & Internship Program

This report provides results and return on investment information for the programs associated with the following appropriations:

Project Title	GAA Funding
Master in Data Science & Analytics	\$1,220,000
Career & Internship Program	\$275,000

In producing highly-skilled graduates to meet the needs of Florida employers, these projects continue to provide lasting, positive returns to Florida taxpayers. These programs also contribute to New College of Florida's recognition among the top public liberal arts colleges in the nation:

- #2 Public Liberal Arts College (*Washington Monthly*)
- #5 Public Liberal Arts College (*U.S. News & World Report*)
- #16 Best Value in Public Education (*Kiplinger's Personal Finance*)
- Top 20 Best Value College (*Fiske Guide to College*)
- #47 Best Value Public College (*Forbes*)
- #1 among all public colleges and universities in the percent of undergraduates who go on to earn PhDs
#1 overall and #1 in doctoral degrees in science and engineering according to the National Science Foundation

As the following pages demonstrate, New College of Florida has been a good steward of funds appropriated to these projects. Should you have any additional questions regarding these projects, please do not hesitate to contact me or the following two individuals who helped prepare this report:

Dr. Brad Thiessen, Chief of Staff; Dir. of Performance Assessment: bthiessen@ncf.edu 941-487-4104
Dr. John Martin, Vice President for Finance & Administration: jmartin@ncf.edu 941-487-4445

cc: Felice Schulaner, Chair, New College of Florida Board of Trustees

Master in Data Science & Analytics (\$1,220,000)

In graduating its third cohort of students, the Master of Science in Data Science (MSDS) program has distinguished itself among the handful of the best data science programs in the country. It has drawn exceedingly talented faculty from around the country to the Sarasota-Manatee area and has produced highly-skilled graduates for Florida employers. As we expand the program, it will become an even greater resource to attract students, faculty, and employers to the State of Florida.

- **100% Success Rate**

100% of students completing the MSDS program have received offers of employment immediately after graduation. 90% have accepted those offers and have earned a median salary of **\$85,000** (which is triple the average per capita income of Florida and 27% higher than the average salary for Florida residents with Master of Science degrees).

The majority of MSDS graduates are employed at top firms in Florida, including:

Akamai (Fort Lauderdale)	American Express (Sunrise)
Bar None Systems (Miami)	Intergreen (Miami)
LexisNexis (Boca Raton)	Novetta (Tampa)
Pacemate (Sarasota)	Stantec (Naples)
Star2Star (Sarasota)	Voalte (Sarasota)

Others have begun careers at companies such as Amazon, BlackRock, Clarafai, Distilled Identity, Gracenote, Hughes Research Labs, Prospecta, Prospect Bio, Saatchi & Saatchi Wellness, Vision Systems Inc., and W20.

The innovative structure of the MSDS program ensures its success. Demonstrating an efficient use of resources, more than **90%** of students who begin in the program have gone on to graduate within two years. This is almost unheard-of in highly technical master of science degree programs and can be attributed to the program's cohort model and focus on collaborative, applied projects. The program's requirement that students complete a semester-long, full-time practicum experience with corporate partners also ensures its success, as 75% of students have received offers of employment from their corporate practicum provider. In fact, **all Florida-based corporate partners sponsoring practicum students have hired the students they sponsor and have asked for additional students in the years to come.**

- **Serving Florida Corporate Partners – Attracting Employers to Florida**

As mentioned above, the defining feature of the MSDS program – its focus on developing working relationships with corporate partners who provide data, internships, and practicum experiences to program participants – has proven to be wildly successful. While our students benefit from the experience they receive working with real data as part of data science teams, our corporate partners gain access to highly-skilled talent in a very competitive market.

In September, the Florida Board of Governors awarded LexisNexis its *State University System Business Champion* award in recognition of an outstanding partnership with the SUS through the New College of Florida MSDS program. More importantly, the program's corporate partner base (especially those partners located in Florida) has continued to grow, weaving the College more deeply into the fabric of Florida's high-tech business environment. The list of MSDS corporate partners now includes the following:

Adgorithmics	Divers Alert Network	PropLogix
Akamai	Emhart Glass	Prospecta
Allen Brain Institute	Epic Systems	Prospect Bio
Amazon	Gracenote	RevUnit Inc.
American Express	Hughes Research Laboratories	Saatchi & Saatchi Wellness
Ancestry.com	Intergreen USA	Sarasota Memorial Hospital
AventuSoft	Leidos	SiteSpect
Bank of America	LexisNexis	Stantec
Bay State Health	Loggerhead Instruments	Star2star
Bealls	Lovelace Respiratory Research	Teachers Pay Teachers
BlackRock Inc	Institute	Ultimate Software
Blue Cross Blue Shield	Mind Research Network	United States Geological Survey
CACI	NASA Langley Research Center	Vencore
Cienga Security	Ned Davis Research	Vision Systems Inc.
Clarifai	Nielsen	Voalte
Colchis Capital	Novetta	Vox Media
CoreLogic	Pacemate	W20
Distilled Identity	Proagrica	

Further evidence of the success of this corporate partnership model is provided by the fact that all current MSDS students have found summer employment or internship opportunities, the majority of which at Florida-based firms.

Also, we held preliminary discussions last year with a start-up that was considering relocating from Cambridge, MA to Sarasota to have better access to our graduates. We anticipate this interest will grow alongside the program, as the MSDS program attracts employers in need of data scientists to Florida.

• Undergraduate Computer Science, Statistics, and Data Science Programs

In addition to its tremendous success with graduate students, the MSDS program was designed to allow New College of Florida to develop undergraduate programs in computer science, statistics, and data science. MSDS faculty teach at least half-time in the undergraduate program, and this has led to remarkable growth in the number of students enrolled in computer science and statistics courses.

The following table displays this increase in enrollment in computer science:

Year	Enrollment	% change	Graduates	% increase	Average Salary
2018-19	~500	23% (est.)	17	91%	\$70K (4)
2017-18	408	49%	9	80%	\$78K (7)
2016-17	274	27%	6	66%	\$80K (4)
2015-16	216	70%	3	50%	\$125K (1)
*2014-15	127	102%	2		\$102.5K (2)
2013-14	63		0		

* MSDS faculty were hired in 2014-15; additional computer science faculty hired in 2016-17

Already, 40% of New College of Florida's undergraduate degrees are awarded in STEM fields. As computer science enrollment continues to grow – and as an undergraduate statistics, an undergraduate data science, and a 3+2 BS/MS program in Data Science programs are added in 2019-20 – New College of Florida will continue to lead the SUS in undergraduate STEM degree production.

The MSDS program has provided a positive return on investment to Florida taxpayers, has enhanced the reputation of New College of Florida, and has produced highly-skilled graduates to meet employer demands.

Career & Internship Program (\$275,000)

Through its Center for Career Engagement and Opportunity (CEO), New College of Florida delivers career, educational, fellowship, and internship support services to New College of Florida students.

Since its establishment in 2014-15, the CEO has tracked its return on investment through the following metrics:

Metric	Graduating Class		
	2014	2018	Change
Percent of graduates employed (earning at least \$25,000) or enrolled one year after graduation	41.8%	54.2%	+12.4%
Median salary of graduates one year after graduation	\$25,000	\$26,700	+6.8%
Percent of graduating seniors completing at least one internship	12.6%	48.6%	+36.0%

As the table shows, the efforts of the CEO have significantly improved New College of Florida's performance on each metric.

- **Career support services, internships, interactions with employers**

During 2018-19, CEO staff engaged in 237 high-impact meetings with local, state, and national business leaders. This increased the name recognition of New College and led to increased employment of our graduates.

As a result of the efforts of the CEO, more than half of all New College of Florida students complete at least one internship prior to graduation. Surveys indicate that 100% of internship providers were satisfied with the performance of New College of Florida interns and many have requested we provide additional interns in the future. These internship opportunities are crucial for liberal arts graduates to gain employment experience and skills to communicate their skills to employers.

This year, the CEO:

- Listed 1,136 employment opportunities on Handshake (our career services enterprise system)
- Served 532 alumni who responded to alumni surveys
- Held 191 in-person appointments
- Hosted 11 virtual (online) appointments
- Hosted 4 mock interviews
- Served 117 students through career workshops
- Taught 29 students in student life skills courses
- Educated 311 students in soft skills workshops
- Provided assistance for 123 internships
- Held general career fairs for 120 students, plus specialized career fairs for 12 students

We have reason to believe these efforts were successful, as a survey of our 2019 graduating class has found:

- 60% of graduates indicate they are already employed or enrolled in continuing education
- 24% have enrolled in advanced degree programs

We anticipate these numbers will increase as we gain additional responses to the survey. The numbers will also increase over time, as we have found that 96% of our graduates are employed or enrolled within five years of graduating from New College of Florida at a median salary of \$65,000 (double the median salary in the state of Florida).

- **Fellowships**

In addition to its career services, the CEO has demonstrated its effectiveness in leading students to win fellowships and scholarships:

- 74 Fulbright Scholarships awarded to New College students in the past 15 years
- 1 of 2 Florida SUS schools ranked a Top Fulbright Producer in the past 5 years (2013-18)
- 25 Gilman International Scholarships awarded to New College students since 2004
- 16 New College students received NSF research grants for summer 2018 projects

This year, the New College of Florida Fellowships Team successfully guided ten students to earn the following prestigious scholarships/fellowships:

- Two Benjamin A. Gilman Scholarships (one for study in Canada and the other in Japan). The U.S. Department of State's Benjamin A. Gilman International Scholarship is a grant program that enables students of limited financial means to study or intern abroad, thereby gaining skills critical to our national security and economic prosperity.
- One Critical Language Scholarship (CLS) for Chinese Language. CLS is an intensive overseas language and cultural immersion program for American students enrolled at U.S. colleges and universities. CLS is sponsored by the U.S. Department of State with funding provided by the U.S. Government, and is part of a wider government initiative to expand the number of Americans studying and mastering foreign languages that are critical to national security and economic prosperity. CLS plays an important role in preparing students for the 21st century's globalized workforce and increasing national competitiveness.
- Four Freeman ASIA Awards (representing four different countries of study - China, Japan, Korea, and Taiwan). The Freeman-ASIA program is designed to support U.S.-based undergraduates with demonstrated financial need who are planning to study abroad in East or Southeast Asia. The program's goal is to increase the number of U.S. citizens and permanent residents with first-hand exposure to and understanding of Asia and its peoples and cultures.
- Two Fulbright Grants for 2019, continuing New College's great record success with the Fulbright U.S. Student Program. One student will undertake a Research/Study Grant in Kenya, and the other will be serving as an English Teaching Assistant in Spain.
- One Udall Scholar. The Udall Scholarship honors the legacies of Morris Udall and Stewart Udall, whose careers had a significant impact on Native American self-governance, health care, and the stewardship of public lands and natural resources. Only 55 Scholars, nationwide, were selected on the basis of commitment to careers in the environment, Native health care, or Tribal public policy; leadership potential; record of public service; and academic achievement.